

## Abstract

### Device and Process for Temperature Regulation of Sections of the Interior of an Aircraft

5 A process for temperature regulation of sections of the interior of an aircraft with the following steps: recording of the respective actual temperatures and the respective nominal temperatures in the individual sections; mixing of engine bleed air and air which is cooler than the engine bleed air in order to obtain pre-tempered mixed air at  
10 a temperature which essentially corresponds to the lowest of the nominal temperatures recorded; distribution of the pre-tempered mixed air to all sections; and post-tempering of the mixed air distributed to the sections with higher nominal temperature corresponding to the differences between the respective nominal temperatures and the respective actual temperatures can be carried out in a device with a controlled mixer valve for the mixing of engine bleed air and air that is cooler than the  
15 engine bleed air in order to obtain pre-tempered mixed air flowing out of the mixer valve; to a distribution line connected to the outlet of the mixer valve which is connected to the respective sections by means of at least two supply lines; individual heating units assigned to the respective sections; sensors assigned to the individual  
20 sections for the respective actual temperatures and transmitters for the respective nominal temperatures; a regulator unit which controls the mixer valve dependent upon the respective nominal temperatures and the respective actual temperatures in the individual areas in such a way that the pre-tempered mixed air is of a temperature which essentially corresponds to the lowest of the nominal temperatures for all  
25 sections, and which controls the heating units assigned to the other sections corresponding to the differences between the respective nominal temperatures and the respective actual temperatures.